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A Multi-Group Moderating Effect of Work-Engagement of Job Demands-Strain Relations: The Case of the Saudi Arabia Lecturers

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Abstract
This study examined the moderating effects of work-engagement levels on the relationship between several factors affecting job strain among university lecturers. 217 lecturers participated in the study, and were drawn from university staff at Imam Abdulrahman Bin Faisal University in Saudi Arabia. A questionnaire survey was used. The results revealed that there exists a relationship between the study variables, and that a high level of work engagement has an effect on the study variables. Based on these results, academicians and decision makers at the university level need to promote a positive learning environment at the university in order to improve job engagement and job outcomes.

Keywords
Multi-Group Moderating, Job Strain, Work Engagement, Job Demands.

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Introduction

Literature dedicated to job demands has, time and again, evidenced its detrimental effects on psychological health and well-being of workers (e.g., Jdaitawi, Saleh, Ishak, Lina and Musallam 2014; Landsbergis, Schnall, Pickering, Warren and Schwartz 2003; Idris 2011). Nevertheless, employees continue to face job demands of different types including workload, co-workers' relationships and work ability, and are continually experiencing various symptoms of stress and strain that range from burnout and health issues to dissatisfaction on the job, psychological stress, concentration loss, work sense loss and, in some serious cases, depression (Vander-Doef and Moes 2010; Trepanier, Fernet and Austin 2013).

From the above symptoms, job strain has been the focus of several studies owing to its close connection with job demands and work related outcomes (e.g., self-efficacy, autonomous motivation job control role, leave intention, low productivity and high turnover rates) (Keegel and LaMontagne 2009; Idris 2011; Trepanier et al 2013; Martin, Bronzatti, Vieira, Parra and Silva 2000; Williams, Wissing, Rothmann and Temane 2010; Jdaitawi, Almutawa and Talafha 2014; Weigl, Muller, Hornung and Zacher 2013; Al-Mutawa, Jdaitawi, Saleh and Awwad 2014). Such factors have also been evidenced to minimize stress but, in some instances, it is insufficient (Xathopoulou, Bakker, Demerouti and Schaufeli 2007). Hence, other factors have to be examined for their role in the relationship between job demands and strain as suggested by Trepanier et al (2013).

Despite the significant number of studies that focused on job stress (Trepranier et al 2016; Conti, Angelis, Cooper and Faragher 2006), only a few were carried out in the academic setting (university and higher education), which is a distinct setting (Onyishi, Ugwa, Onyishi and Okwueze 2018). The above literature gaps have to be addressed in the academic context specifically, as educators are primarily faced with higher ambiguity levels, high job stress, lack of teaching activities, research and professional service, higher teaching loads, ineffective leadership, insecurity on the job, loss of control and issues in communication along with intention to quit (Idris 2011; Tytherleight, Webb, Cooper and Ricketts 2005; Idris 2009). Another factor that has been connected to psychological health indicators and stress level of workers is work engagement. According to Schaufeli (2015), work engagement refers to the positive,

enriching state of mind that is linked to vigorous, dedicated and absorptive work. This factor has been revealed to predict positive/negative results, psychological and organizational, with engaged individuals feeling fulfilling experiences that make them focus their physical, cognitive, and emotional efforts into achieving a high performance more than their less engaged peers (Priyadarshi and Raina 2014). Only a few studies were pursued on this topic (e.g., Tummers, Steijn, Nevicka and Heerema 2016; Vigoda-Gadot, Eldor and Schohat 2013). In addition, the moderating role of work engagement has not been extensively addressed in literature, with only a few attempts in this direction (Shantz and Alfes 2013; Sulistyo and Suhartini 2019). This also holds true for the relationship between job demands and individual strain. In spite of the promising outcome of Sulistyo and Suhartini's (2019) study, where work engagement was found to have a moderating role in the relationship between individual characteristics and job satisfaction, the study is riddled with limitations in terms of sample and factors. Furthermore, an important omission within the current literature is the test of the complete JD-R model (testing both direct and moderating relationship) (Brough, Timms, Siu, Kalliath, O'Driscoll and Sit 2013). The current research provides a unique contribution by comparing the effectiveness of the moderating work engagement level to explain the relationship between the JD-R model and psychological strain. Therefore, this study aims to examine if work engagement (high vs. low) mitigates the adverse effects of job demands on the strain of teaching staff. The study proposes the moderating role of work engagement on the job demands (workload, work conflict and work ambiguity)-strain relationship.

Theoretical Framework

Schaufeli and Bakker's (2004) job demand-resource model (JD-R) posits that in every profession, there are specific job stress factors and they can be categorized into two major groups namely, job demands and job resources (Bakkar and Demerouti 2007). Specifically, in job demands, different psychological, social, and organizational aspects may lead to stress with higher demands for efforts (Bakker and Demerouti 2007; Schaufeli and Bakker 2004). On the other hand, job resources stem from the physical, psychological and organizational work aspects that help bring about goals' achievement, minimize job demands and promote motivation and individual development (Bakker and Demerouti, 2007; Hakanen, Bakker and Schaufeli 2006). In

addition to the above, the COR theory assumptions are aligned with the moderating role of work engagement in the work and non-work variables relationships. The theory posits that individuals obtain more resources by investing in them, and those having higher resources have higher capability of gaining resources. Work engagement has been compared to abundance of energetic resources in the form of robust emotions, cognitive agility and physical vigor that stems from the ongoing resource gain process (Goregievski and Hobfoll 2008). Hence, emotional, mental and physical investment in work enables engaged employees to orchestrate resource gain more than their generally engaged counterparts, and they relay more benefits from their work to their family life (Johnson and Jiang 2017). In contrast, those who are not engaged in their work find it difficult to obtain benefits from their work life.

Literature Review

Job Demands-Resources and its Consequences

In the context of education, role overload, role ambiguity and role conflict have all been revealed to be experienced by academicians (Alghamdi 2017; Verbyrgh 2017). In the same line of findings, role overload and ambiguity were found to significantly predict psychological strain (Idris, 2011), as role ambiguity, conflict and overload could lead to stress symptoms (Huda, Rusli, Naing, Tengku, Winn and Rampal 2004). In addition, academicians have been generally found to be inclined towards quitting their positions in higher education institutions or they experience regret in pursuing an academic profession (Kinmain 2001). Moreover, prior studies of the same caliber reported the significant impact of role stressors on individual and organizational outcomes. Owing to the fact that psychological approaches mostly posit that human behaviors are caused by personal-environmental factors, it is necessary to include personal resources into the JD-R model as indicated by Shaufeli and Taris (2014).

In the stress-strain relationship, Posig and Kickul (2003) supported a significant relation between the two constructs. Strain is conceptually described as a process experienced by individuals who are under stress, which consequently leads to negative outcomes including cynicism, professional efficacy loss, lack of organizational commitment and intention to quit (Idris 2011). Strain was also described by Lee and Ashforth (1996) as the affective feeling experienced by the individuals which are brought on by the lack of energy and emotional resources. Idris (2011) defined strain as

a distinct emotional distress form that comes from having to respond to an event that threatens the well-being of the individual. Meanwhile, in Winnubst (1993), the author described strain as a multi-process that entails behavioral, psychological, and physiological factors arising following a stressful experience. Hence, the majority of studies contended that overload, conflict, and ambiguity directly relate to strain, while role ambiguity, conflict and overload could lead to the development of stress symptoms (Huda et al 2004). In the education field, the majority of academicians perceive that quitting their positions in higher institutions may be better for them or they regret following the academic profession as their career (Kinman 2001). Similarly, role overload was evidenced to predict occupational stress (Karimi et al 2014). Moreover, lack of research finance, lack of support, task overload, ineffective leadership, job insecurity, control loss, and issues in communication were all evidenced to be stress sources (Alghamdi 2017; Verbyrgh 2017; Tytherleight et al 2005). Although there are several studies in literature that evidenced the relationship between role stressors and strain (e.g., Lee and Ashforth 1996; Posig and Kickul 2003), authors still highlighted the need to examine the relationships extensively (Idris 2011).

In light of the JD-R model, Demorouti et al (2001) explained the stress-strain relation to be a physical, psychological, social and organizational job aspect mitigating the negative job demands while helping in work goals achievement and boosting personal growth, demands, learning and positive work engagement. The employee's engagement level was found to be minimized by higher levels of strain (Brough et al 2013), and as such, work engagement and work-related outcomes are included in the JD-R model (Bakker and Demerouti 2007) as significant variables of working conditions.

Work Engagement

Work engagement studies have steadily increased in the past few years (Cankir et al 2015; Geldenhuys et al., 2014). Regardless of the fact that the work engagement concept has existed for some time, ambiguity on its meaning persisted (Macey and Schneider 2008; Thomas 2009). Nevertheless, attempts to conceptualize the term came from Khan (1990), who referred to it as the members of the organization gathering themselves to their work roles, in terms of engagement, employment and physical, cognitive and emotional expression during their performance of their roles (p. 694). It

was also defined by Schaufeli, Salanova, Gonzalez-Roma and Bakker (2002, p. 74) as a positive, fulfilling, work-related mind state that is characterized by dedication, absorption and vigor. The above-mentioned concepts of dedication, absorption and vigor form three different work engagement components (physical, emotional and cognitive). Beginning with the physical work engagement component, vigor in its higher levels increases the readiness of the individual to dedicate effort to their work by not being easily fatigued and developing the inclination to be resolute when facing difficulties/failure. Work engagement appears to be related to the emotional and cognitive vigor and the positive attitudes towards work including job satisfaction, job involvement, organizational commitment and low intention towards turnover (Schaufeli and Bakker 2004).

There are several cited reasons as to why work engagement results in positive-related outcomes; first, engaged individuals have fulfilling experiences that make them direct their physical, cognitive and emotional energies into performance achievement (Priyadarshi and Raina 2014). Additionally, work engagement is a top predictor of outcomes both positive/negative and both psychological and organizational. This has been evidenced in many studies; for instance, Hakanen and Schaufeli (2012) showed that work engagement has a negative influence on depressive symptoms and a positive one on the satisfaction of employees. In the same line of study, Schaufeli and Bakker (2004) reported that engaged employees were attached to their firms and were disinclined to quit, which means that an engaged employee trusts their relationship with the organization and harbors a positive attitude towards their job. Different drivers exist to influence the level to which an individual can be inclined towards self-investing personal energies into high work performance (Cankir et al 2015; Macey and Schneider 2008). Employees who are highly engaged in their work are also committed to the organization as the organization is the one that provides job resources, facilitating their enthusiasm about work and work achievement, and paving opportunities for development, learning, and growth (Cankir et al 2015; Macey and Schneider 2008; Houkes et al 2001). In light of the accumulation theory, scholars including Marks (1977) showed that individuals who have high work engagement experience spillage of positive effects to places outside of work. Actively engaged individuals may have higher psychological, physical and cognitive involvement and higher connection towards work compared to their not so actively engaged counterparts (Garg, Dar and Mishra 2018; Rothbard 2001; Ruderman, Ohlou, Panzer and King 2002; Khan 1990).

Such positive outcomes arising from work engagement are relayed to their family and friends as reported by Wayne, Grzywacz, Carlson and Kacmar (2007).

Moderating Effect of Work Engagement

In the context of education, teaching staff are expected to express positive emotions as demanded by their work, even in the face of challenges and difficulties (role conflict, ambiguity or dealing with ever changing rules and work requirements). This frequently results in higher stress and strain levels. In this regard, literature evidences the significant effects of role stressors on outcomes (both individual and organizational (Bakker and Demerouti 2007; Hakanen et al 2006). Such impact depends on the individual and/or the present moderating factors, and as such, the inconsistent findings reported by prior studies can be partially related to such conditions. For an in-depth relationship between stressors and strain, the present study argues that work-engagement is a moderating variable, and it examines the relationship between stressor and strain among members of the teaching staff. In Schaufeli et al.'s (2002) study, the authors stated that engaged workers were more energetic and they were more related to their work activities, and their abilities to deal with the job demands. This in turn, provides them with the impetus to have less of an intention to quit and to have high energy and enthusiasm levels when working and being immersed in their work (Yongxing, Du, Xie and Lei 2017). The above argument may lead to active and positive job performance and satisfaction, commitment and lower turnover levels along with positive outcomes in the organization level as prior studies reported (e.g., Bothma and Roodt 2012; Field and Buitendach 2011; Mendes and Stander 2011; Newman and Josep 2010). The literature reviewed indicated that several studies have focused on job demands-resources (JD-R) and its outcomes but limited empirical findings have been revealed of work engagement's moderating role. In addition, there are limited studies that tackle the influence of work engagement on the relationship between stress and outcomes, with some studies proposing theories that need empirical findings to support them (e.g., Noesgaard and Hansen 2017; Priyadarshi and Raina 2014; Yalabik, Popaitoon, Chowne and Rayton 2013; Sulea, Virga, Maricutoiu and Schaufeli 2012; Schaufeli and Bakker 2004). Hence, the study contributes to both theory and practice in many ways. This study is distinct from former ones in that it investigates the moderating

effects of work engagement on the level of strain among the Saudi teaching staff members.

Research Hypotheses

In this study, the focus is on examining the factors that significantly affect strain among Saudi university staff members. Accordingly, the following hypotheses are formulated for testing;

Hypothesis 1: Job demands (role overload, role ambiguity, and role conflict) have a significant relationship with psychological strain.

Hypothesis 2: Work engagement has a positive moderating role on the relationship between role overload and strain in a way that the relationship is stronger with high work engagement.

Hypothesis 3: Work engagement has a positive moderating role on the relationship between role ambiguity and strain in a way that the relationship is stronger with high work engagement.

Hypothesis 4: Work engagement has a positive moderating role on the relationship between role conflict and strain in a way that the relationship is stronger with high work engagement.

Methodology

Study Design

The current study design focuses on a quantitative approach to achieve the research objectives. The use of the quantitative method is appropriate in this research because it enables the researcher to get snapshot views and attitudes of the respondents with respect to the social phenomenon under study (Sekaran, 2003). According to Stacks (2002), a survey is a method of gathering relatively in-depth information about respondent attitudes and beliefs, particularly when it involves a large populations - since the number of the lecturers is too high, it is more practical to use a survey rather than interviews.

Respondents

In the current research, the author adopted a cross-sectional data collection technique in the form of questionnaire survey. A total of 217 questionnaire copies were distributed to the members of the staff in a public Saudi university in Dammam (Imam Abdulrahman Bin Faisal University). The reason behind choosing this university is the fact that Imam Abdulrahman Bin Faisal University (IAU) one of the three universities in Saudi Arabia awarded autonomy to manage their administrative and financial affairs. This was in order to enable the university to develop its own resources, research, teaching and learning as well as to compete with other institutions in terms of quality outcomes (Middle East Magazine, 2020). Furthermore, the university is the largest government university in the Eastern region of Saudi Arabia (Alwosaifer et al., 2018), and ranked one of the top five universities in Saudi Arabia (AlkuwaitI, Vijay and Downing, 2019, World Ranking Institutions QS, 2020). Prior to the actual study, a pilot study was conducted with a smaller sample to validate the survey instrument. Following the pilot test, the researcher made the necessary modifications on the items based on the feedback of the participants.

Procedures

The university's Scientific Council Deanship at Imam Abdulrahman Bin Faisal University was contacted for assistance and permission to go through with the study. A formal questionnaire was distributed to members of the staff, who were working full time in different colleges, after they assured of their anonymity and the confidentiality of their responses. From the 217 instructors, 168 were male instructors, and the remaining 49 were female instructors.

Instruments

Job Demands Measurement

The self-administered questionnaire items were gauged using a multi-item scale adopted from prior related literature. The reliability and validity of each scale were confirmed through several steps. The job demand variable was utilized for measuring three work demand dimensions, which are workload, work ambiguity and work conflict.

Work Overload Scale

The scale used to measure work overload was adapted from Spector and Jex (1998) Quantitative Workload Inventory (QWI), with the items gauged using a 6-point Likert

scale ranging from 1 depicting 'never', and 6 depicting 'all the time'. Some of the measurement items are; "My job requires me to work very fast", and "My job requires me to work very hard". The scale's Cronbach's alpha was reported to be 0.80.

Role Ambiguity

As for role ambiguity, it was measured by 6 items, gauged on a 6-point Likert scale, ranging from 1 depicting 'never' to 6 depicting 'all the time'. Items like "My job has clear, planned goals and objectives" and "I feel certain about how much authority I have" are included. The scale had a reported Cronbach's alpha value of 0.85.

Role Conflict

Six items were adopted from Rizzo, House and Sidney (1970) study to measure role conflict, with the items gauged on a 6-point Likert scale, ranging from 1 depicting 'never' to 6 depicting 'all the time'. Some of the items included in the scale are "I receive assignment without adequate resources", and "I work on unnecessary things". The scale has a reported Cronbach's alpha value of 0.68.

Job Strain

Psychological strain was measured using Goldberg's (1978) 12 items in a general health questionnaire. The items were measured along a 6-point Likert scale ranging from 1 depicting 'never' to 6 depicting 'all the time'. Items like "been able to concentrate on what you are doing", and "been feeling unhappy or depressed" were included. The scale had a reported Cronbach's alpha value of 0.74.

Work Engagement

For work engagement, Schaufeli, Bakker and Salanova (2006) inventory scale was used to measure it. The scale constituted 17 items, gauged on a 6-point Likert scale, ranging from 1 denoting 'never' to 6 denoting 'all the time'. It had a reported Cronbach's alpha value of 0.78. The scale has been extensively validated in literature with the three engagement dimensions of vigor, dedication and absorption.

Analysis Results

Data analysis is a process that comprises of steps like coding the responses, cleaning, screening the data, and selecting the appropriate data analysis strategy (Churchill & Lacobucci, 2004; Sekaran, 2000). Therefore, for the present study, data analysis and hypotheses testing involving statistical tools and methods are carried out through the

utilization of Statistical Package of Social Science (SPSS). The study utilized several analysis tests such as descriptive analysis, Pearson correlation and regression analysis in order to examine the study hypotheses.

Hypotheses Testing

This study used regression analysis to test the effects of job demands on strain. Table 1 displays the correlation results of the study variables. In terms of regression analysis, Table 2 displays that job demands managed to explain a considerable amount of variance in psychological strain (R= .962, R2 = .925, F= 870.683, .000, p= <.0). Further investigation was carried out to confirm the independent variables that had the highest effect on psychological strain and the results indicated that role overload (B = .489, t = 41.295, p<.05) and role ambiguity (B = .478, t = 30.393, p<.05) significantly impacted psychological strain but role conflict did not (B = .031, t = 1.744, p>.05).

Table 1. Summary of Correlation between Variables

Measure	Strain
Role Overload	.754**
Role Ambiguity	.515*
Role Conflict	.252*

Note: *p = <.05

Table 2. Regression Anaysis: Predictors of Psychological Strain

R	R-square	Adjusted R-square	F	Sig.
.962	.925	.924	870.683	.000*
Variables	B	t	Std. Error	Sig
Role Overload	.489	41.295	.012	.000*
Role Ambiguity	.478	30.393	.016	.000*
Role Conflict	.031	1.744	.018	.083

Note: *p = <.05

Moderating Effects of Work Engagement

With regard to the proposed moderating effect of work engagement levels between the relationship of job demands and psychological strain, there were two regression analysis sets conducted. Added to this, multicollinearity was calculated to establish its absence among the study variables prior to calculating the interacting terms as suggested by Aiken and West (1991) and Kline (1998). The regression analysis of each was conducted in two steps. In the first step, the first independent variable and dependent one was simultaneously entered, and in the second step the independent variable was entered in the first step and psychological strain was entered into the equation after. From the calculations the incremental variance (ΔR2) constituted by the interaction term reflects the interaction effect size. For hypotheses 2, 3 and 4, the relationship of job demands constructs (role overload, role ambiguity and role conflict) with psychological strain and the moderating role of work engagement on the relationship were tested. For the first construct of the variable as shown in table 3, role overload indicated contribution to the explained variance (ΔR2 = 1.685, t(13.855) = sig.000, p < .05). Low level work engagement was significant at (B = 2.054, t(3.540), sig. 001< .05). The overload-high work engagement interaction term (B = .604, t(1.663), sig .099,>.05) was decreased and insignificant and thus moderated work engagement was supported. For the second construct of the variable, role ambiguity indicated contribution to explain variance (ΔR2 = 2.248, t(9.792) = .000, p < .05). Low level work engagement was significant at (B = 2.054, t(3.540), sig. 001< .05). The role ambiguity-low work engagement interaction term (B = 1.827, F(3.334), sig. 001<.05) was significant and thus the moderated effect was not supported. For the third construct of the variable, role conflict indicated contribution to explain variance (ΔR2 = 3.559, t(9.327) = .000, p < .05). Low level work engagement was significant at (B = 2.054, t(3.540), sig. 001< .05). The role conflict-low work engagement interaction term (B = 2.049, t(3.676), sig. 000<.05) was significant and thus the moderated effects were not supported.

For the high level of work engagement in table 4, the first construct of the variable, role overload indicated contribution to explain variance (ΔR2 = 1.868, t(14.069) = .000, p < .05). High level work engagement was significant at (B = .679, t(1.164, 4.796), <.247). The overload-high work engagement interaction term (B = .331, t(.869), sig. 387<.05) was decreased to insignificance and thus role overload was fully supported. For the second construct of the variable, role ambiguity indicated

contribution to explain variance (ΔR2 = 1.783, t(6.698) = .000, p < .05). High level work engagement was significant at (B = .679, t(1.164, 4.796), <.247). The role ambiguity-high work engagement interaction term (B = .455, t(.841), sig. 402<.05) was decreased to insignificance and thus role ambiguity was fully supported. For the third construct of the variable, role conflict indicated contribution to the explain variance (ΔR2 = 2.696, t(6.111) = .000, p < .05). High level work engagement was significant at (B = .679, t(1.164, 4.796), <.247). The role conflict-high work engagement interaction term (B = .514, t(4.796), sig. 000<.05) was decreased to insignificance and thus role conflict was fully supported. Therefore, the moderated hypotheses of the high level of work engagement were supported.

Table 3. Regression Anaysis: Moderator Effects of Low Level of Work Engagement

Variables	B	t	Sig
Role Overload	1.685	13.855	.000*
Low Work Engagement	2.054	3.540	.001*
Role Overload-Low Work Engagement	.604	1.663	.099
Supported			
Role Ambiguity	2.248	9.792	.000
Low Work Engagement	2.054	3.540	.001
Role Ambiguity-Low Work Engagement	1.827	3.334	**.**001
Not supported			
Role Conflict	3.559	9.327	.000
Low Work Engagement	2.054	3.540	.001
Role Conflict-Low Work Engagement	2.049	3.676	**.**000
Not supported			

Note: *p = <.05

Table 4. Regression Anaysis: Moderator Effects of High Level of Work Engagement

Variables	B	t	Sig
Role Overload	1.868	14.069	.000*
Low Work Engagement	.679	1.164, 4.796	.247
Role Overload-Low Work Engagement	.331	.869	.387
Supported			
Role Ambiguity	1.783	6.698	.000*
Low Work Engagement	.679	1.164, 4.796	.247
Role Ambiguity-Low Work Engagement	.455	.841	.402
Supported			
Role Conflict	2.696	6.111	.000*

Low Work Engagement	.679	1.164, 4.796	.247
Role Conflict-Low Work Engagement	.514	4.796	.000*
Supported			

Note: *p = <.05

Discussion

This study primarily aimed to investigate the relationships between job demands and job strain, with the moderating role of work engagement among lecturers in a Saudi university in Dammam. The results supported all four hypotheses and were consistent with prior studies in literature that revealed a partial relationship between job demands (role overload, role ambiguity and role conflict) and psychological strain, with positive relationship in the case of role overload. More specifically, the results supported that high level of work engagement significantly moderates the relationships between the independent variables (role overload, role ambiguity and role conflict) and the dependent variable (strain). The results indicated that those engaged lecturers were able to experience positive results and able to adjust to the job requirements. The results are consistent with those reported by (Mulholland, McKinlay and Sproule, 2013; Idris 2011; Fako's 2010; Priyadarshi and Raina 2014; Hakanen and Schaufeli 2012; Schaufeli and Bakker 2004; Cankir et al 2015; Macey and Schneider 2008; Houkes et al 2001).

Moving on to the moderating role, the study hypothesized that work engagement moderated the role of job demands-job strain. This is aligned with the JD-R model which posits that job resources may prevent the effects of job demands on strain. Researchers (Girardi, De-Carlo, Corso, Anderson, and Falco 2019; Bailey, Madden, Alfes and Fletcher 2017; Yongxing et al 2017; Bothma and Roodt 2012; Field and Buitendach 2011; Mendes and Stander 2011) found work engagement to relate to positive results including low health complaints level, high level of psychological and physical health, high job performance level, high work motivation and well-being of workers. In the present study's hypothesized moderating relationship, the relationship between job demands and strain is argued to be weaker among those with high work engagement levels. This is a crucial extension of the literature dedicated to job demands-strain relationship among academicians as prior studies have largely ignored the topic. This indicates the moderating role of work engagement on the association between job demands and strain, in a way that there is a stronger relationship for those that are highly engaged in work. Prior studies evidenced the same findings in that they

reported that individuals with high work engagement level had lower job strain and higher outcomes (e.g., Johnson and Jiang 2017).

More specifically, with the role conflict dimension of job demands, this study hypothesized that work engagement moderates the conflict-job strain relationship. In this study, it is argued that university staff members who are highly engaged in their work are not hindered by job demands and are protected from job strain. Job resources act as energetic resources that are used to meet demands and to provide employees with coping abilities against work stresses (Bakker et al 2014). The results are supported by Van-Beek et al (2011) findings that showed the protective role of work engagement against burnout, in such a way that people who are engaged in their work did not burnout easily compared to their disengaged counterparts. In the same way, Schaufeli et al (2002) indicated that employees who were engaged in their work were more energetic and connected with the activities they were immersed in, and they were confident of their ability to meet the job demands. In relation to the above, employees who have high levels of eudemonic well-being like work engagement are healthier, satisfied and psychologically satisfied, and they also perceive a hedonic well-being in their commitment in comparison to their low-eudemonic experiencing employees (Barret-Cheetham, Williams and Bednall 2016).

Conclusion

The JD-R model was used to determine the findings concerning the stress-strain relationship among lecturers, and based on the outcome, individual and organizational factors do affect the job demands-strain relationship of such context and thus, this study presents context-specific boundary conditions for this relationship. First, the study determines the relationships between the study variables and the critical role of work engagement in the underlying linear relationship between job demands and job strain of lecturers, with the relationship stronger for those with high work engagement. To conclude, this study's findings support the hypothesized relationships between job demands and strain, and the moderating role of work engagement on such relationships. The study concluded that the engagement level may lead to a more robust job demand-strain relationship. This argument was also supported by related studies like Schaufeli and Bakker (2009), who related that stress-experiencing employees had depleted and diminished energy levels and thus, low levels of engagement. Without a clear picture of

work expectations, employees cannot feel responsible or feel committed to their work, which may lead to mitigated work engagement and adverse psychological and physical outcomes. This finding supports the JD-R theory's assumption that work engagement is a motivational construct that influences job and personal resources, as well as individual and organizational outcomes (well-being, etc.). From this perspective, the study argues that decision-makers in Saudi universities should take lecturers' engagement and work satisfaction into consideration to boost their individual and work outcomes at the universities.

Implications

The JD-R model posits that work-demand with the related work variable has a moderating effect on the stress-psychological strain relationship. This study has several theoretical implications, the main implication of which is the extension of the stress-strain literature and the demonstration that work engagement does mediate the job demands-psychological strain relationship. The first contribution of the study is to the JD-R model and the relationship between stress and strain, with the introduction of work engagement. In this line of contribution, prior studies mainly focused on work-related variables mediating influence on the same relationships, disregarding the moderating-mediating role of work engagement which was largely ignored (e.g., Noesgaard and Hansen 2017; Priyadarshi and Raina 2014; Yalabik et al 2013). This study followed the suggestions and assumptions of JD-R and the COR theories and analyzed the moderating role of work engagement to provide a deeper insight into the model and to accordingly respond to the suggestions of prior studies (e.g., Johnson and Jiang 2017). Another contribution to literature is the resolution of prior studies' limitations in focus (job-demands-strain linear relationship) such as in the studies by Idris (2011), Fako (2010) and Sulea et al (2012). Following the JD-R model, the study conducted an analysis of the work engagement moderating-mediating role between stressors-strain factors to deepen the insight into the model and to respond to the call of past studies for the same (Noegsgaard and Hansen 2017; Priyadarshi and Raina 2014). The study also resolved the limitations of prior studies which were confined to the job-demands strain relationship (e.g., Idris 2011; Fako 2010; Sulea et al 2012). The study's empirical findings showed that work engagement does moderate-mediate the job demands-psychological strain relationship. In addition to the above implications, this study also extended literature on JD-R model as prior studies confined their focus to

individual differences and personality factors as moderating effects on stress-strain association. Several authors did examine the moderating role on said relationship, but only a few considered work engagements. Essentially, the study provided insight into the relationship between stressors and strain, through work engagement integrated into the JD-R model. Future studies can build on the findings to examine the topic further and extend its understanding. Finally, the effects of job demand on the psychological strain levels of lecturers were the focus of this study, as prior studies largely avoided the study of university lecturers and academicians. The present study shed light into the stressors-strain relations, with a moderating-mediating variable among the specific context of university lecturers, extending the literature further. Practically, the findings indicated the partial relationship of job demands to psychological strain – a finding that is consistent with prior studies. This highlights the need for decision makers to minimize job demands and distribute tasks among the workers on the basis of their skills and specialties or develop new strategies that pave the way for new opportunities for employees to leverage, which relate to provision of training and scheduling leisure activities.

Limitations and Recommendations

Notwithstanding the contribution of the study to literature regarding the moderating role of work engagement on the desirable outcomes level, there are some limitations that have to be accounted for. The first limitation relates to the study sample, which is limited to one Saudi university, which could limit the findings' generalization in terms of demographics and geographical locations. The second limitation concerns the use of the quantitative data collection technique, specifically through self-reported questionnaires, where the results may have been affected by the agreement and social desirability inclination of the respondents. Hence, future studies of this caliber should adopt the qualitative method of study to provide an enriching view of the university lecturers' perceptions. Third limitation, the study examined the moderating role of work engagement on job demands-strain relationship; future authors may select and investigate other individual and organizational factors. For example, research could have benefited from the study of lectures' characteristics, such as the relationship and moderating effects between the study variables according to lecture experiences and gender levels.

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